

PATENT**ABSTRACT**

1           In one aspect the plasma lamp according to the present invention  
2 comprises a gas envelope that is constructed from ceramic material and  
3 a sapphire window rather than quartz. According to another aspect of  
4 the present invention, a plasma lamp comprises an RF structure for the  
5 radio wave radiation and an envelope for housing the excitation gas that  
6 are formed so as to constitute a single, integrated ceramic structure.  
7 According to yet another aspect of the present invention, the plasma  
8 lamp comprises a waveguide structure having solid material such as  
9 ceramic rather than air for the dielectric and a gas housing made of a  
10 combination of solid ceramic and a sapphire window. In this way, the  
11 separate quartz gas envelope and air-filled waveguide structure  
12 employed in the prior art are replaced by a single, integrated structure.

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